

EPA, Region 9

Drinking Water Protection Section

Dear Ms Rumrill,

After reading excerpts from the Technical Report on Technologically Enhanced Naturally Occurring Radioactive Materials in the SW Copper Belt of AZ, written by Office of Radiation and Indoor Air, Radiation Protection Division of the EPA, I have additional concerns and question regarding the intended issuance of UIC permit to Florence Copper Inc.

The excerpts not only acknowledge that copper mines extract and concentrate radioactive materials but specifically addresses the amount of radio chemicals released by the BHP Copper Florence In-Situ Project. The data indicates that the PLS produced from the BPH in-situ project contained VERY HIGH levels of radionuclides.

Recognizing that the area to be mined is naturally fractured and contains many unfilled bore holes, EPA should be very concerned that the radioactive material will enter the aquifer and will contaminate the drinking water for over 100,000 residents.

Please explain to me how Florence Copper Inc. can prevent these radioactive chemicals from entering into the fragmented rock and bore holes when BHP failed?

With such a risk of radioactive contamination of the aquifer, how can EPA justify this permit?

Thank you for addressing my questions.

Sincerely,

Barbara Manning

U.S. Environmental Protection Agency, Region 9

Drinking Water Protection Section, Mail Code WTR-3-2

75 Hawthorne Street

San Francisco, CA 94105

Dear Ms Rumrill,

Upon receiving their UIC permit from EPA the mining company BHP ran a pilot test using the in-situ process to recover copper in 1997. This test operated for only 100 days.

Data from BHP indicates their failure to maintain hydraulic control of the sulfuric acid solution. Maintaining hydraulic control is critical to protecting the aquifer. In addition the in-situ mining process resulted in 26 cases of exceeding water quality standards.

Even after repeated rinsing BHP could not meet the quality standards. Even after ADEQ raised the standards on allowable contaminants BHP was unsuccessful in meeting the less stringent quality standards. In 2012, Florence Copper advised the EPA that the total solids had risen 3 to 12 times higher than alert levels. Obviously BHP pilot test is still contaminating the water.

Specifically what changes have been made to the model Florence Copper will use in their 2 year pilot test which will assure insure hydraulic control of the acid solution and containments in acceptable range?

What will Florence Copper Inc do differently than the BHP mining company to protect the aquifer?

Please note that BHP pilot test program was a failure.

Sincerely,

Barbara Manning